

In the Specification

~~Please~~ amend the specification as follows:

~~Paragraph 2 (page 1, line 12 to page 2, line 6):~~

A1
There are now many computerized devices capable of storing and accessing large amounts of data that employ quite compact displays. Examples of such smart compact devices are smart handheld devices, such as PDAs and smartphones. Other smart compact devices may be kiosks or other equipment that is physically large, but with displays that are compact compared to those of traditional computers. These smart compact devices are commonly used for storing and accessing personal data such as contact addresses and calendar information. A smart compact device has an operating system, running on a microprocessor, ~~with a display screen, and a pointing device configured to accept input from an activating object, such as a finger, pen, and the like, used with a pointing device.~~ The pointing device is used to input to or to control the actions of the operating system through a user interface. The display screen is typically an LCD module, and the pointing device is, for example, a resistive touchscreen. The operating system ~~is~~ will typically an event driven operating system with a graphical user interface, such as a windowing operating system, but may also be a text-based user interface.

~~Paragraphs 8 and 9 (page 4, lines 4-17):~~

A2
Attempts have been made to implement pop-up data on smart compact devices using a pointing device that has only one X and Y position state. Microsoft's PocketPC generates pop-up data in some situations if the activating object of the pointing device is held on and touches a control object for a period of time. An alternative implementation is described in Patent Application EP 0 996 052 A2, where tapping on the pointing device switches modes to display pop-up

data. Neither of these approaches is intuitive for the user, and so pop-up data implemented in this way detracts from the usability of the smart compact device.

A² A further challenge with the user interface of a smart compact device is that smart compact devices, unlike desktop computers, are generally used in a variety of environments, and often ease of use and quick access to data is of paramount importance. A standard measure of the usability of the user interface of a smart compact device is the number of taps or other discrete actions that a user must make to perform a specific task (e. g. dialing a phone number).

Paragraph 17 (page 6, line 17-18):

A³ FIG. 2 is a diagram showing pop-up data, which is displayed when the cursor associated with the pointing device has been held over the screen object for a short period of time.

Paragraph 20 (page 7, lines 3-4):

A⁴ FIG. 5 shows the ~~same~~ screen object of FIG. 4, and its associated pop-up data ~~20~~ that has been triggered by holding the activating object above the hyperlink.

Paragraph 25 (page 7, lines 16-17):

A⁵ FIG. 10 illustrates a typical prior art process for dialing a number when the contact name ~~may be~~ is ambiguous.

After Paragraph 28 (page 8, lines 5-7) please insert Paragraph 28.1:

A⁶ FIG. 14 illustrates a display according to an alternative embodiment.

Paragraphs 31-33 (page 9, line 1 to page 10, line 5):

A⁷ The invention is shown diagrammatically in FIG. 3. In an illustrative embodiment, the enhanced pointing device may be an inductive pen input system,

comprising a pen sensor 18 and a pen control system 20, such as that described in publication WO 00/33244, entitled "Position Sensor". This system has the key advantage that it can provide X and Y position data both when the activating object is touching the display screen and when it is held in close proximity to, but not touching, the display screen, and is able to distinguish between the two states. Alternatively, the first state may require a firm touch while the second "nontouching" state may occur even when the activating object is lightly touching the display screen.

A⁷ In an alternative embodiment, such an enhanced pointing device could also be a capacitive touchpad, capable of sensing an activating object, such as a finger, pen, and the like, in close proximity to its surface, as well as when touched to the surface.

In a further alternative embodiment, the enhanced pointing device could be any device capable of providing X and Y position data, and two or more states associated with that data, those states being a base state (corresponding to a mouse pointer position with no buttons pressed, or an activating object in close proximity to, but not touching a display screen), a selected state (corresponding to a mouse pointer position with the left button clicked, or an activating object touched to the display screen of a smart compact device), and zero or more further extended states (corresponding, for example, to a mouse with the right button clicked, or an activating object with a side button held in).

~~Paragraphs 36 – 40 (page 10, line 15 to Page 12, line 7):~~

A⁸ In an illustrative embodiment, the pen control system 20 is driven by a pen driver 22, which can be software running on the microprocessor of the smart compact device, ~~the pen driver 22~~. This pen driver 22 converts the pen data 34 from the sensor system into pen position messages 36, formatted according to the requirements of the operating system 24. These messages 36 contain both the X

and Y position data, and flags to signal which one of the states the pen system is reporting.

In an alternative embodiment, the software running on the smart compact device may be structured in a manner other than that shown in FIG. 3, as long as it is but one that reports of the activating object 's position to the appropriate component of the compact device, such as the operating system or the user interface.

AS In an illustrative embodiment, the operating system 24 processes the pen position message, and alters the visible state of any appropriate screen object, according to the state of the activating object as reported in the pen position message. If the activating object has been held above a screen object for more than a short length of time (for example, a short length of time being typically 1 second or less), the operating system will change the ~~state of the data displayed on the screen objects~~ so that the pop-up data is displayed. FIG. 4 shows a typical screen object 50, and a hyperlink 54. FIG. 5 shows the same screen object 50, and its associated pop-up data 52 that has been triggered by holding the activating object above the hyperlink 54.

In an alternative embodiment, the pop-up data can be triggered immediately when the activating object is held over the screen object. Such an embodiment can be used, for example, to enable a user to easily dial the correct number from the contacts directory of a smartphone or similarly enabled portable device.

In an alternative embodiment, the selected data is displayed or hidden depending on whether the first state or the second state is detected. Information on the display screen is controlled in response to the presence of an activating object. At least a portion of the information can be selectively hidden and/or displayed in response to whether the activating object is in the first state or the second state.

FIG. 6 shows a typical small display screen on a smartphone. The display screen 60 as depicted in Figure 6 is showing shows device status information

A⁸ 62,64 and a window 66 containing ~~with~~ directory information. Within the window 66, the directory information is shown as lines 68, each containing screen objects, such as the contact name 70, the contact company 72 and an icon 74 intended to trigger the dialing process. An alternative embodiment to this screen is shown in FIG. 7, where the contact names 70 do not have a dial icon associated with them.

Paragraph 47 (page 14, lines 11-13):

A⁹ In an alternative embodiment, the removal of the pop-up data may be ~~signalled~~ signaled by another user action, such as the movement of the activating object outside the area of the display screen occupied by the pop-up data.

Paragraphs 49 and 50 (page 15, line 1 to page 16, line 5):

A¹⁰ In an alternative embodiment, the pop-up data does not have to take up the whole display screen of the smart compact device, but can be displayed on a part of the display. FIG. 13 illustrates such a display. The activating object is held above the desired contact name 70, which is then highlighted, triggering the pop-up data containing contact details 90 in the lower section of the screen. Moving the activating object to another contact name will cause the pop-up data to change to details of the new contact, and dialing the contact can be initiated by tapping the dial icon 88. This embodiment has the advantage that the context of the contact name can be seen together with the contact details. In this embodiment, the popup data is not removed when the activating object is moved away from the display screen, but remains until an action icon has been selected, pop-up data has been triggered from another contact name, or another application is selected on the smart compact device.

In a further alternative embodiment, the directory listing takes the form of FIG. 14. Here, the display screen in the directory application always has a listing 92, and pop-up data 90 associated with the highlighted contact 70. Holding and moving the activating object in proximity to the display above the listing causes

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the highlight to move, changing the pop-up data to match the highlighted contact. This allows the user to ensure that the right contact is selected from several ambiguous contacts. Clicking, tapping, or touching the activating object on the highlighted contact brings up the full information screen of FIG. 8, allowing the user to select the required contact method. This embodiment addresses both key disadvantages of the prior art, while being easy and intuitive for the user.

Paragraph 55 (page 17, lines 6-10):

A¹¹
In an illustrative embodiment, the exact method of triggering the pop-up data, the duration of any timings associated with triggering the pop-up data, the range from the display screen that is defined as proximity and the form of any pop-up data will be determined by usability testing so as to ~~maximise~~ maximize the benefit to the user in a given application.
